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(54) FORMING METHOD FOR INSULATING FILM TO COMPOUND

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(71) NIPPON DENKI K.K. (72) KAZUTAKA KAMITAKE (51) Int. CP. H01L21/31

PURPOSE: To improve the heat absorbing efficiency of emitting infrared ray by condensing and emitting the infrared ray to a semiconductor substrate formed with an amorphous layer or a polycrystalline layer on the back surface of a substrate crystal via a reflecting mirror and reaching the desired temperature only at the crystal and then forming an insulating film.

CONSTITUTION: An infrared lamp 2 such as a high power tungsten lamp or the like is mounted on a reflecting mirror 5 plated with Au or Pi on the surface, and a substrate crystal 2 supported to a transparent quartz supporting base 3 and scaled in a transparent quartz tube t is installed in the inner space. Since the intrared ray heating converts and uses the light energy of the infrared ray into thermal energy of heating the substrate, the substrate preferably has large absorption of the light of particularly 0.5-2µm in wavelength to efficiently convert the ray to the thermal energy. In order to further improve the temperature rising and falling characteristics to suppress the decomposition of the compound semiconductor as low as possible, an amorphous layer 2' is formed on the insulating film forming substrate 2. This layer 2' has large conversion efficiency of infrared light to heat as compared with the single crystal state of the compound semiconductor in the absorption coefficient to the wavelength of approx.



